

REMARKS

Claims 1-78 were pending in the application. Claims 32-44, 53-60 and 70-78 have been withdrawn from consideration.

In the Office Action, claims 1-8 and 13-31 are rejected under 35 USC 103(a) as being unpatentable over Hallstrom et al (WO 9833980) or Frolich et al (WO9833979) in view of Begala (U.S. Patent No. 5,595,629). This rejection is respectfully transversed.

Specifically, it is said in the Office Action that either Hallstrom or Frolich disclose a process for sizing paper in which a sizing dispersion, which preferable has an overall anionic charge, is added to aqueous pulp stock and then a conventional retention system is used, including ones which use cationic and anionic polymers. It is further said that Begala teaches a retention system using cationic polymer is very effective in pulp stocks containing sizing agents and other standard papermaking ingredients and thus, it would have been obvious to employ the retention system of Begala as the retention system in Hallstrom.

The present invention is directed to a process for sizing paper that results in improved sizing performance. More specifically, the process of the present invention comprises (1) adding to an aqueous cellulosic suspension an anionic or cationic sizing dispersion, and then separately adding a sizing promoter comprising a cationic organic polymer having one or more aromatic groups, and an anionic polymer having one or more aromatic groups to the cellulosic suspension; and (2) forming and draining the obtained suspension.

Both Hallstrom and Frolich relate to sizing dispersions having improved stability and viscosity. Such changes in stability and viscosity result in improved ease in the handling and storage of the dispersions, but improvements to these characteristics do

not inherently translate to an improvement in the sizing performance of the dispersions, as is achieved through the present invention. In fact, it is possible to achieve improvements in the stability and viscosity of a dispersion but with the result of an anti-sizing effect. Further, unlike the present invention, neither Hallstrom nor Frolich teach, disclose or suggest the separate addition of both a sizing dispersion and a sizing promoter, as set forth in the present invention, to the aqueous cellulosic suspension prior to forming and draining the suspension.

As stated in the Office Action, Begala teaches improvements in drainage (i.e., dewatering) and retention of the aqueous cellulosic suspension. There is no indication at all in Begala that the disclosed retention system would provide any improvement in sizing or could in any way be considered to be a sizing promoter. In fact, Begala discloses that its retention system may be utilized when other additives, *including sizing agents*, are charged to the cellulosic slurry without any substantial interference to the activity of its invention (see col. 4, lines 23-26). Further, there is also no teaching, suggestion or disclosure in Begala of the separate addition of both a sizing dispersion and a sizing promoter, as set forth in the present invention, to the aqueous cellulosic suspension prior to forming and draining the suspension.

When holding an invention obvious in view of a combination of references, there must exist some suggestion, motivation or teaching to select the references and combine them to produce the subject invention. Such suggestion, motivation or teaching, as well as an expectation of success must come from within the prior art. *In re Vaeck*, 947 F.2d. 488, 20 USPQ2d 1438 (Fed Cir 1991). Furthermore, the prior art must teach all the limitations of the claims. *In re Wilson*, 424 F.2d. 1382, 165 USPQ 494, (CCPA 1970).

In the present case, it is asserted that it would be obvious to one skilled in the art to use the invention of Begala in Hallstrom in view of its "superior performance". As a first point, it is unclear why Begala is considered to be the most superior, and therefore the most obvious, retention system to be used by one skilled in the art when certainly

most producers of retention and drainage systems would make similar remarks with regard to the performance of their systems for certain applications. But even if, in *arugendo*, Begala is considered to be a retention aid with “superior performance”, it is further unclear where in the prior art it is taught, suggested or disclosed that one skilled in the art would consider the invention of Begala to be a sizing promoter. Also, as mentioned above, all of Begala, Hallstrom and Frolich are silent with regard to the separate addition of a sizing dispersion and a sizing promoter to the aqueous cellulosic suspension prior to forming and draining the suspension in order to improve sizing performance.

Also in the Office Action, claims 9-12, 19-22, 45-52 and 61-69 are rejected under 35 USC 103(a) as being unpatentable over Hallstrom or Frolich in view of Begala and further in view of Persson et al (WO 9955964). This rejection is also respectfully transversed.

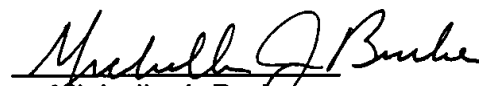
Hallstrom, Frolich and Begala with regard to the present invention are discussed in detail above. Persson, similar to Begala, teaches improvements in drainage, retention and paper strength. Also similar to Begala, Persson is silent with regard to any beneficial effect on sizing performance that would result from the utilization of its invention. As such, one skilled in the art would not be taught to use the invention of Persson as a sizing promoter as claimed in the present invention. Further, Persson is also completely silent as to the separate addition of a sizing dispersion and a sizing promoter to the aqueous cellulosic suspension prior to forming and draining the suspension in order to improve sizing performance.

Thus, for the reasoning set forth above, claims 1-31, 45-52 and 61-69 should be considered both novel and non-obvious over the cited prior art and reconsideration of the rejected claims is respectfully requested.

In accordance with Section 714.01 of the M.P.E.P., the following information is presented in the event that the Examiner deems a call desirable:

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